

**Abstract**

A tire parameter sensing system (12) for a vehicle (10) having a tire (16) comprises a tire-based unit (26) associated with the tire (16) and including structure (70, 72) for sensing a parameter of the tire (16) and for transmitting a parameter signal (38) indicative of the sensed parameter. The parameter signal (38) having at least first and second different signal characteristics. The tire parameter sensing system (12) also comprises a vehicle-based unit (34) having a first receiving channel (116) for receiving at least portions of the parameter signal (38) that include the first signal characteristic and a second receiving channel (118) for receiving at least portions of the parameter signal (38) that include the second signal characteristic. A signal detection portion (120) of the vehicle-based unit (34) is responsive to the first and second signal characteristics for determining the sensed parameter of the tire (16).